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Agricultural Memorandum No 439

Spring hatch of Nematodirus larvae - effect of dry weather

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Ag Mem 298 gave formulae for the date of peak hatch based only on March Soil temperatures.

If the extent of larval dryness is estimated by counting the number of days without measurable rain in February (first two days of any sequence not to count) plus the similar days for March (first day of a series not to count), giving a dry day total of B,
and if the March soil temperature is averaged only over the days when the larvae were wet (as defined above), giving a mean A°F, then

Peak hatch date (days after March 31st)

$$= 198.6 + 0.4B - 4.55A$$

this shows an improvement on the previous forecasts in Ag Mem 298

Results:-

	A	B	Peak hatch Estimate	Actual peak hatch Field	Experiment	Previous Forecast
1955	35.6	10	May 11	May 8		May 13
1956	39.2	10	Apr 24	Apr 18		Apr 27
1957	43.3	12	Apr 6	Apr 5 Apr 2	Apr 13	Apr 11
1958	36.1	7	May 7	May 11		May 11
1959	41.8	30	Apr 20	Apr 18		Apr 17
1964	38.9	13	Apr 27	Apr 26		Apr 26
1965	37.6	16	May 4	May 12	May 4	May 3
1966	40.1	20	Apr 24	Apr 23	Apr 19	Apr 22
1967	40.8	18	Apr 20	Apr 29	Apr 29	Apr 18
1968	39.8	9	Apr 21	Apr 12 Apr 26	Apr 24	Apr 26
1969	36.2	6	May 6	May 7 May 10	May 2	May 12

A large improvement cannot be expected as April weather is not included, but the mean "error" decreases from 5.2 to 4.3 days.

Any comments or suggestions on this paper should be referred to the author.

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